

Amendment
US Appl. No. 10/551,826
Attorney Docket No. PSA05002

REMARKS

By the present amendment, the specification has been amended to correct a typographical error on page 2, line 22 (“of” should be “or”).

Further, claim 1 has been amended to be presented with separate paragraphs for legibility, to replace “injection means” by “injector,” and to replace “injection” by “injector” on line 9.

Claim 6 has also been amended to replace “injection means” by “injector,” and claim 8 has been amended to delete the term “so called.”

Claims 1-12 are pending in the present application. Claim 1 is the only independent claim.

I. **Objection to claim 8**

In the Office Action, claim 8 is objected to because it recites “so-called.”

The term “so called” has been deleted in claim 8 as suggested in the Office Action. Accordingly, it is submitted that the objection should be withdrawn.

II. **Obviousness rejections**

In the Office Action, claims 1-3, 5-6, 8-9 and 11-12 are rejected under 35 U.S.C. 103(a) as obvious over US 5,271,229 to Clarke et al. (“Clarke”) in view of US 4,467,757 to Dazzi (“Dazzi”).

Further, in the Office Action, claim 10 is rejected under 35 U.S.C. 103(a) as obvious over Clarke in view of Dazzi and further in view of US 3,741,175 to Rouger (“Rouger”), claims 4 and

Amendment
US Appl. No. 10/551,826
Attorney Docket No. PSA05002

7 are rejected under 35 U.S.C. 103(a) as obvious over Clarke in view of Dazzi and further in view of US 4,417,469 to Stevenson et al. ("Stevenson"), and claim 12

It is alleged in the Office Action that Clarke discloses the features of the engine of claim 1 except the injection pressure, and that Dazzi discloses a high pressure injector, so that it would have been obvious to use a high pressure injector in Clarke.

The rejection is respectfully traversed. It is submitted that, even though fuel pumps at high pressure of 1000 bar and higher have been commonly known for diesel engines, this was not the case for gasoline engines before the present invention.

Reference is made to the excerpts from the Automotive Handbook published by Bosch (5th edition, 2000), pages 454-459 and 536-539, which are submitted with this paper.

From these excerpts, it is clear that within the world of gasoline engines, 0.5 bar pumps (or 1.5 when the atmospheric pressure is added) are considered as "high pressure pump." For example, the Handbook states at page 455 that a common pressure is "300... 450 kPa" (0.3-0.45 bar) and that "at times pressures of up to 700 kPa must be provided" (see Handbook at page 455, left column, two first paragraphs). Also, at page 457, a pressure "extending up to 450 kPa" (0.45 bar) is mentioned (see Handbook at page 457, left column, first line). Thus, the order of magnitude of fuel pressure in gasoline engines is commonly considerably less and very remote from the high pressures used for diesel engines.

Turning to the cited references, it would have been clear to the person of average skill in the art that both Clarke and Dazzi relate to diesel engine and not self-igniting gasoline combustion engines.

Amendment
US Appl. No. 10/551,826
Attorney Docket No. PSA05002

In particular, it is noted that Dazzi mentions “diesel engines” as well as “gasoline engines of the type with direct injection” in the “background” section (col. 1, lines 11-12), but this paragraph of Dazzi is only a general presentation of injector construction. The description of the invention in Dazzi is exclusively focused on diesel engines. Indeed, the only embodiment of Dazzi concerns a diesel engine (see Dazzi at col. 3, line 6). Thus, the pressure of 1000 bar disclosed at col. 4, lines 44-46 of Dazzi, to which reference is made in the office Action, corresponds to a commonly known pressure for a diesel engine.

Dazzi is completely silent as to gasoline engines. Further, the other cited references fail to remedy the deficiencies of Dazzi. Accordingly, the person of the art would have had no motivation from Dazzi or any other incentive to modify the usual fuel injection pressure of a gasoline engine.

In contrast, the present invention provides a self-igniting gasoline engine wherein the pressure of the gasoline provided to the injector is above 250 bars, as recited in present claim 1. The features of the presently claimed invention are not taught or suggested in any of the cited references, and a person of ordinary skill in the art would have had no motivation or other incentive to reach the features of the presently claimed invention. Therefore, the present claims are not obvious over the cited references taken alone or in any combination.

Further, regarding the dependent claims, the cited references fail to teach or suggest the combined features of each of these respective claims. Therefore, each of the dependent claims is not obvious over the cited references taken alone or in any combination.

In view of the above, it is submitted that the rejections should be withdrawn.

Amendment
US Appl. No. **10/551,826**
Attorney Docket No. **PSA05002**

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

In the event there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 502759.

Respectfully submitted,

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